IN THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parentheses. Claims 5, 13, 17 and 18 have been canceled without prejudice to, or disclaimer of, the subject matter of these claims. The subject matter of these claims has been subsumed within other pending claims. Further, the revisions to claims 8, 16, 19 and 20 are to correct antecedent bases or other informalities. Support for the revisions to claims 1 and 9 is found at least on page 16, line 11 through page 17, line 4.

LISTING OF CLAIMS

1. (Currently Amended) A method of forming heat exchange surfaces on a core object, comprising:

placing at least a part of a thermally conductive core object within a mold cavity that includes a formation that defines ~~is formed to define~~ one or more fins as heat exchange surfaces about the core object;

injecting a heated metal slurry into the formation that defines the fins ~~mold cavity~~ under a predetermined pressure to substantially simultaneously form the fins; and

cooling the heated metal slurry to form a contact area that provides ~~forming~~ a substantially continuous void free interface between the core object

and the fins ~~metal slurry~~ when hardened for effective heat transfer across the contact area ~~interface~~.

2. (Original) A method according to claim 1, including heating a metal to a thixotropic state, and then performing said injecting step using the heated thixotropic metal as said metal slurry.

3. (Original) A method according to claim 2, including raising the temperature of the metal to about 900 degrees F. prior to said injecting step.

4. (Original) A method according to claim 2, including using type AZ91D magnesium alloy as said metal, and raising the temperature of said alloy to about 900 degrees F. prior to said injecting step.

5. (Canceled).

6. (Original) A method according to claim 1, including providing a heat conductive pipe as said core object.

7. (Original) A method according to claim 6, including inserting a rigid rod axially through the pipe thus avoiding deforming of the pipe during the injecting step.

8. (Currently Amended) A method according to claim 7, including forming the mold cavity to define the one or more fins ~~as the heat exchange surfaces~~ about the outer circumference of the pipe.

9. (Currently Amended) A method of forming heat exchange surfaces on a core object, comprising:

arranging a first series of die plates in tandem for linear movement about a first perimeter of a first molding apparatus;

arranging a second series of die plates in tandem for linear movement about a second perimeter of a second molding apparatus;

forming each of the first series of die plates to define first parts of one or more fins as heat exchange surfaces about the core object;

forming each of the second series of die plates to define corresponding second parts of one or more of the fins as said heat exchange surfaces about the core object;

positioning the first and the second molding apparatuses so that corresponding ones of the first and the second die plates face one another while being displaced by the apparatuses along an axial direction with respect to an elongated thermally conductive core object;

placing the core object between the facing ones of the first and the second series of die plates;

urging the facing die plates to a closed position thus forming full mold cavities corresponding to the fins ~~heat exchange surfaces~~ about the core object;

injecting a heated metal slurry into the full mold cavities under a predetermined pressure to substantially simultaneously form the fins; and

cooling the heated metal slurry to form a contact area that provides ~~thus forming~~ a substantially continuous void free interface between the core object and the fins ~~metal slurry~~ when hardened for effective heat transfer across the contact area ~~interface~~.

10. (Original) A method according to claim 9, including heating a metal to a thixotropic state, and then performing said injecting step using the heated thixotropic metal as said metal slurry.

11. (Original) A method according to claim 10, including raising the temperature of the metal to about 900 degrees F. prior to said injecting step.

12. (Original) A method according to claim 10, including using type AZ91D magnesium alloy as said metal, and raising the temperature of said alloy to about 900 degrees F. prior to the injecting step.

13. (Canceled).

14. (Original) A method according to claim 9, including providing a heat conductive pipe as said elongated core object.

15. (Original) A method according to claim 14, including inserting a rigid rod axially through the pipe, thus avoiding deforming of the pipe during the injecting step.

16. (Currently Amended) A method according to claim 15, including forming the die plates to define the one or more fins ~~as said heat exchange surfaces~~ about the outer circumference of the pipe.

17. (Canceled).

18. (Canceled).

19. (Currently Amended) A method according to claim 1, wherein the fins ~~heat exchange surfaces~~ and the core object are comprised in a heat sink arrangement for an electronic component.

20. (Currently Amended) A method according to claim 9, wherein the fins ~~heat exchange surfaces~~ and the core object are comprised in a heat sink arrangement for an electronic component.